NATIONAL ASS'N OF REGULATORY UTILITY COMMISSIONERS (NARUC)

Interest: Nonprofit organization composed of governmental bodies which regulate common carriers and utilities.

Other Issues:

Preemption.

- Opposes preempting state regulations which set technical standards for private switch (e.g. PBX, STS, Centrex) ALI. (6)

  -- NARUC is aware of many instances where private switches pass the ALI of the main telephone number and address of the private switch, rather than that of the caller to the PSAP. This problem is particularly prevalent with PBXs which serve an entire school district, an entire apartment complex or an entire university. (5-6)

  -- Because some states have already addressed this problem by approving tariffs which allow PBX owners to pass accurate ALI to PSAPs, and are examining other solutions to this problem, NARUC opposes the federal preemption of these rules. (6)

NATIONAL CELLULAR SAFETALK CENTER, INC.

Interest: Non-profit corporation dedicated to teaching young people how to use cellular phones safely and for safety

Wireless-Related Issues:

Provision of location information

- Supports the implementation of locator capability. The 3-step implementation schedule seems reasonable. (4)

Funding

- Observes that the industry is incented by customer needs, not regulation, in developing 911 on its own, without cost to customers or taxpayers. (5)

Other:

Privacy

- A wireless caller may be more likely to do her "civic duty" if she has the option of preventing SNI from being transmitted. (4)

NATIONAL EMERGENCY NUMBER ASSOCIATION, GEORGIA CHAPTER

Interest: Group that represents the Georgia 911 community.

PBX-Related Issues:

Ability of PBX to pass calling number and location identifier.

- States that it is imperative that 911 operators receive accurate ALI from PBX operators. Supports the Adcom Petition and the Commission's attempt to adopt this standard. (1)

- Concurs with proposal that PBX systems provide at a minimum caller telephone number, caller location identification, and call-back number information (2)

Timing of compliance. Concurs with implementation schedule of one year for manufacture or importation and 18 months for newly installed systems. (2)

Reach 911 without initial "9". Takes no position, noting that there are off-setting advantages and disadvantages with dialing 9-911 or 911 alone. Depending on a user's familiarity with his system, he could either dial the initial "9," as may be customary when he didn't need to, or dial 911 alone when he needed the first "9." Either case presents problems in delays and accidental calls. Recommends training and labelling providing notification of the correct procedure. (2)

Attendant notification. Concurs in proposal to require attendant notification when an attendant is present, as long as the notification process does not impede the normal flow of call routing and does not interfere with subsequent 911 transfers. (2)

PBX owner's obligation to update LEC. Concurs in proposal to require owners of PBX systems to perform database maintenance for their systems, stating that 911 centers could not maintain this information without an extraordinary effort. (2)

Wireless-Related Issues:

Scope of requirement (covered and excluded services). Wireless services present crucial 911 issues. Cellular has a profound impact -- in Georgia, most centers have a total volume of 18 to 25 percent cellular calls -- and maintains that this is an opportune time for Commission action, in view of the increase in wireless units. (2)

Availability of 911 to service-initialized handsets. Supports widest possible 911 access, which is particularly important in roaming as opposed to a subscriber's home service area, concurs in proposed one-year time limit, and encourages the FCC to mandate 911 service without user validation in home and roaming environments. (3)

911 call priority. Agrees that 911 calls should be given priority on a first-in-queue basis rather than a preemptive basis. Users should be given some indication of being in a queue rather than receiving a busy signal. States that a one-year time limit is sufficient for operational purposes. (3)

Provision of location information.

- States that location is the most significant information in public safety dispatching, but recognizes the technological difficulties facing vendors. (3)
- Reluctantly concurs in 5-year phase-in plan. (3)
- Is unaware of any 911 centers that use latitude and longitude for geographic location calculations. Most use more local delineators such as streets or land lots as their database. Agrees, however, that latitude and longitude is reasonable, and states that, to acquire this crucial information, 911 centers will be willing to work through a conversion process. (3)
- Concurs that no federal grade of service is appropriate at this time. Levels of service will depend on suppliers who must reach a consensus on the issue. (3)

Re-ring/call-back. Agrees with 3-year time limit to provide call back information to 911 centers in receipt of wireless 911 calls. (4)

NEXTEL COMMUNICATIONS, INC.

Interest: SMR service provider.

Wireless-Related Issues:

Scope of requirement (covered and excluded services).

- Supports the tentative conclusion that 911 rules and regulations should apply to all CMRS offering real-time voice services, where consumers expect availability of 911. (3)

- Before mandating 911 regulations for all CMRS providers, the Commission must take into account that some offer either limited interconnected service or non-interconnected services as well as interconnected. For customers choosing only non-interconnected, dispatch service, the service provider should not be obligated to provide 911 access. (4)

- Dispatch services are private systems not traditionally consumer-oriented, and users do not expect access to 911. (4)

- The NPRM bases the proposal for wireless E911 on cellular use of 911 services. In contrast to cellular, the majority of dispatch operations are not interconnected and users do not expect their dispatch unit to provide access to 911 services. Dispatch users can directly contact their dispatcher, who can contact the PSAP. (4 n.6)

- Urges the Commission to craft its 911 regulations carefully to ensure that only those CMRS services provided to "users of the public switched telephone network" are incorporated therein. (4)

- States that, in any event, reclassified private mobile radio service providers would not be subject to these requirements until the end of the CMRS transition period. (4 n.8)

General

- Updating wireless technology to provide 911 services is more than an equipment issue, and the numerous issues and complexities surrounding the implementation of E911 on wireless systems will require a systems solution necessitating a concerted effort by the wireless industry, the emergency services industry, and the LEC community. (5-6)

- Due to the enormity of the issues that must be resolved before E911 can be provided on wireless systems, the Commission should not mandate deadlines for wireless E911 at this time, but should adopt PCIA's proposal for an industry standard-setting process and timeline. (7)

911 call priority. If the Commission mandates 911 call priority, it must allow providers the time necessary to implement a queuing mechanism. (5)

Re-ring/call-back. Technological compatibility among PSAPs and wireless providers is necessary before re-ring and call-back or text telephone capabilities are a reality. PSAPs must be able to receive 10-digit numbers as well as 7-digit numbers to call-back or re-ring a wireless subscriber roaming in another NPA. Re-ring and call back must also overcome equipment-related issues such as user lock on a handset, a low battery in the unit, a faulty antenna, or forwarding of calls to voice mail. (6)

Common channel signalling. The wireless industry lags behind the wireline industry in implementation of common channel signalling and does not necessarily employ consistent protocols. (5)

Labelling.

- Opposes labelling, noting that: (1) a user can contact a PSAP and alert it of his or her location through talking with the PSAP and therefore have access to limited 911 capability -- a label warning the user that there is no E911 service from the unit may mislead users into believing that no 911 capability is available; and (2) an appropriately drafted label would be too voluminous to fit on a mobile handset. (7-8)

- Suggests that more practical, less costly approaches include the inclusion of bill inserts or a provision in the user's manual or service contract. (8)

Funding. Urges the Commission to ensure that the substantial costs wireless providers will incur in implementing E911 are not borne by wireless providers disproportionately, and that providers are able to recover E911 implementation costs. Also, supports PCIA's proposal for the establishment of a process permitting providers to specifically recover E911 costs. (7)

Other Issues:

Liability. Supports PCIA's proposed language regarding liability protection for wireless providers. Absent willful or wanton conduct or negligence, wireless carriers should not be held liable for their actions in carrying out 911 services. (9)

Preemption. Supports preemption of state laws on wireless 911 services and the establishment of uniform E911 rules and regulations, stating that uniformity is critical to the success of E911 in view of wireless users' ability to roam among states -- incompatible state regulations could result in a failure to properly execute an E911 call. (8)

NORTH AMERICAN TELECOMMUNICATIONS ASSOCIATION

Interest: Trade association of manufacturers, suppliers, distributors, retailers, and users of customer premises equipment.

PBX-Related Issues:

Ability of PBX to pass calling number and location identifier.

- Argues that the Commission's policy objective should be to ensure that 911 services are provided widely and efficiently, and in a manner that benefits and does not unduly burden users. As such, NATA opposes the adoption of rules that mandate E911 compatibility without regard to efficiency or the needs of users, and urges the FCC to establish a federal policy that promotes cost-effective deployment of equipment and services that support E911. (2-3)

- The proposed regulations regarding station identification would require costly and intrusive requirements that are not justified on the basis of the record, including extensive design changes and other expenditures by CPE manufacturers, the purchase of costly dedicated services by all purchasers of new PBXs or similar multiline equipment, and intrusion into the installation, maintenance and use of operating business telephone systems. (1, 3-4)

- Disagrees that CPE or a lack of uniformity in CPE may impair emergency services by delivering inaccurate, incomplete, or misleading call origination information to the PSTN, and argues that the problem lies in limitations with network services, which limit multiline CPE systems from transmitting any call origination information over business lines and PBX trunks. (4-5)

- Argues that the record contains no real evidence that quantifies the volume of 911 calls involving multiline wireline CPE or the number of injuries attributable to the absence of station-identifying information for multiline CPE. Absent solid statistics, it is premature, arbitrary, and capricious to conclude that imposing costly station-identification transmission requirements on equipment manufacturers is in the public interest. (6 & n.4)

- The FCC's view that market forces have not been effective in implementing a solution is unsupported and, even if more substantial documentation is produced, it

does not imply that there is a market failure requiring the imposition of intrusive rules mandating deployment and maintenance of a particular technology in CPE. (7)

- The publication of TIA Bulletin 103 resolved significant technical issues. Unless the record reflects a specific problem with the manner in which these issues were addressed, it should be expected that equipment manufacturers or users will voluntarily incorporate cost-effective station identification technologies in CPE systems where technology is a cost-beneficial response to a real need. (8)

- If any mandatory regulation is needed in E911, the FCC's first priority should be to ensure that LECs make the necessary transmission services available to provide end users with transmission capability for station identification information, which is essential to the CPE capabilities the NPRM proposes to require. Once LECs are required to provide basic minimum transmission capability at a reasonable price, CPE manufacturers can be expected to build station identification capabilities into any CPE products where there is demand for such services. (9-11)

- The FCC's proposal to apply the rules to PBXs and similar multi-line telephone systems is vague and overbroad. The rules should not apply to all multiline business systems, such as two-line key systems or even systems with 200 or more stations where costs outweigh benefits because the customer occupies one floor, enabling emergency personnel to identify the location where they are needed. (11)

- With regard to station locations "pinpointed" for emergency personnel, if a group of telephone extension numbers are assigned to a station in a particular building or part thereof, the user should be able to use a single number to identify the entire group. This will allow considerable savings in updating data bases and responds to necessity realities. (12)

- Urges the Commission to consider the cost of compliance of all requirements it adopts, and lists several: (1) cost of designing station identification capabilities into new CPE; (2) costs of adding station identification capabilities to CPE manufactured but not installed before the applicable effective dates; (3) costs associated with maintaining correct station identification and other non-manufacturing costs; and (4) costs of required E911 services, including dedicated CAMA trunks, to be provided by LECs. (12)

- Assuming that the benefits of requiring station identification for some users justify mandatory regulations, the Commission must decide whether its regulations should be specific "input" requirements that compel a particular type of interconnection with E911 services, or more general "output" requirements that allow manufacturers and users to choose from alternative technical solutions. NATA suggests that the latter may be more cost effective and more consistent with the Commission's rules. (13-14)

Timing of Compliance.

- Supports the proposal to grandfather already-installed equipment. Applying new requirements to this equipment would require disruptive changes and unnecessary, premature replacement. (15-16)

- If the proposed requirements applicable to the manufacture and sale of new equipment are adopted, NATA suggests effective dates later than those proposed. Until the Commission adopts final rules, manufacturers cannot be sure of required technical changes, which will necessitate more lead time than one-year, as proposed. The proposed 18-month deadline for applying the rules to installed equipment must also be lengthened to allow sufficient time for equipment to be cleared from manufacturer, wholesaler, and dealer inventories. (16)

- The proposal assumes that a 10-digit number will be assigned to each station, to make the format the same as the ANI currently used to provide location information of single-line or small-system users. Ten-digit numbers are not currently available to users unless they subscribe to direct inward dialing (DID), which, as currently offered by LECs, is a significant additional expense and not subscribed to by a large percentage of business users. These users would require access to a pool of unused 10-digit numbers to comply. (21)

Attendant notification. As currently phrased, requirement appears duplicative. Further, if the system automatically transmits location information to the PSAP, transmission to the attendant should not be required, or, conversely, if there is an available attendant who can direct emergency personnel to the emergency location, transmission of location information to the PSAP should not be required. (21-22)

Training of PBX owner personnel. Questions whether it is appropriate to promulgate a regulation governing the qualifications for what should be, if excessive costs are to be avoided, routine operations. NATA also questions the

basis for concluding that a "licensed professional engineer" is necessarily more qualified than other people not trained in telephone terminal equipment installation to perform verification procedures, and suggests that any imposed standard be specific to the tasks involved and not give special advantages to any professional class or training facility. (22-23)

Labelling of non-compliant equipment.

- Questions the necessity of the proposed requirement and notes that it will be difficult to devise a label that will effectively inform callers without causing confusion in emergency situations or if customers add adjunct equipment to provide station-identification capability. Further, because labels would not be applied to existing equipment, their usefulness would be minimal. (16-17)

- If the FCC does require labels, it should provide at least a year after Federal Register publication for compliance with labelling requirements. (17)

Other Issues:

Liability.

- Notes that any rules the FCC adopts will likely be asserted as governing standards of liability in litigation against PBX owners, vendors, manufacturers, telephone companies, and E911 service providers, and urges the FCC to stress that its regulations are prospective only and are not intended to impose obligations or liability with respect to equipment manufactured or installed prior to the effective dates of the regulations. (17-18)

- Similarly, urges the FCC to emphasize that its rules are not intended as a finding that any existing equipment is unsafe, substandard, or below "state-of-the-art" -- indeed, the FCC must find that there is no "state-of-the-art" equipment at this time because there have been no uniformly available exchange services to which CPE systems could be designed. (18)

- With regard to whom the FCC would hold responsible for compliance, NATA notes that proposed Section 68.320 seems to place responsibility on the manufacturer or grantee of registration. NATA states, however, that not all provisions of proposed Section 68.320, such as that concerning the number of E911 trunks connected to a private switch, are within the manufacturer's control.

If the Commission adopts the other parts of the proposed rule, it should delete this subsection. (18-19)

Funding.

- Urges the Commission to consider carefully responsibility for costs generated by new requirements imposed -- especially costs of network services with which CPE owners must interconnect. If interconnection with E911 trunks is required because it is deemed in the public interest, costs should not be imposed on users, but should be recovered from the general body of ratepayers. (19)

- States that exchange services provided to PBX and key system users have never included station identification capability because LECs chose not to build such features into PBX trunks and business lines. The provision of station identification would now require dedicated E911 trunks, which are of no known use to PBX and key system users except for infrequent handling of E911 calls. It is unreasonable to require PBX and key system users to pay the costs of E911 trunks. (19-20)

- The cost of E911 trunks should not be imposed on PBX and key system users for the added reason that such a requirement will provide LECs with an incentive to overprice the service to improve the competitiveness of Centrex vis-a-vis PBXs and key systems. This could be prevented by making costs of E911 trunks recoverable from generally applicable access charges. (20)

- Similarly, costs of E911 E&M trunks should be recovered from generally applicable charges because the number of E911 trunks will not vary directly in relation to the size of a CPE system. Thus, small system users will be disproportionately affected. If the FCC decides that the costs will be imposed on PBX and key system users, it must retain supervision over tariffing to ensure that the service is priced reasonably. (20-21)

Preemption. If the Commission concludes that market forces will best ensure appropriate deployment of E911 equipment, it should do so as a matter of federal policy, preempting inconsistent state policies. If the Commission chooses to impose regulations on carriers, users, and/or equipment manufacturers and vendors, it should also preempt inconsistent state or local regulations. (14-15)

NORTH CAROLINA CHAPTER OF THE NATIONAL EMERGENCY NUMBER ASSOCIATION (NENA)

Interest: Organization dedicated to improving the availability of universal 911 service.

Wireless-Related Issues:

Provision of location information.

- Because of the increasing volume of wireless 911 calls, the inability of PSAP operators to automatically locate callers is very costly in terms of lives lost and property damaged. (1-2)

Re-ring/call-back.

- The inability of PSAP operators to call back callers is very costly in terms of lives lost and property damaged. (2)

Other.

- Supports APCO/NENA/NASNA positions on wireless and PBX access to E911 and TIA/PCIA/APCO/NENA/NASNA position on wireless access to E911. (5)

PBX-Related Issues:

Ability of PBX to pass calling number and location identifier.

- The present inability of PBXs to pass calling number and location information is a serious threat to life and property, given the ever increasing number of PBX systems. (2-4)

NORTHERN TELECOM, INC. (NORTHERN)

Interest: Manufacturer of telecommunications equipment including PBXs, cellular switching equipment and PSAP equipment.

General:

- In general, the Commission has failed to consider the complexity of some of the areas in which it will be regulating. These areas include the differing sizes of private telephone systems, the existence of wireless PBXs, the difficulty in providing wireless ALI, the existence of digital wiretap legislation, the existence of competitive LECs, and the ramifications for the NANP. (5-9)

- The Commission should be aware that in order to implement the features called for in this Notice, it may be necessary to make changes throughout the network, including changes to the PSAP equipment, central offices, databases and E911 tandems. (9-15)

- Northern suggests that the FCC implement some of the proposed rules immediately, but defer the more complicated issues to negotiated rulemakings. (15-18, 53-54)

- Nationwide standards are essential in order to allow manufacturers to produce equipment for use in all states, allow users to relocate their PBX equipment, and allow roaming wireless subscribers access to emergency services. (19-21)

PBX-Related Issues:

General.

- The FCC's definition of "Enhanced 911" should be the same as the ANSI T1.411-1994 definition. (24-25)

- In order to avoid the obsolescence of its signal power limitation standards, the Commission should reference the appropriate ANSI and EIA/TIA standards rather than promulgating its own. (27)

- Small PBX operations should be exempt from some of these requirements, because compliance might cost more than the PBX itself. (35-36)

- Because many PBX features (e.g. call forwarding, make set busy, non-DID PBXs) make it impossible to call back a disconnected caller, the rules should concentrate on a requirement that the 911 connections be held open so that the PSAP can re-ring a caller who hangs up. (37-38)

- The rules governing wireless PBXs should be promulgated in a negotiated rulemaking. If, however, the Commission applies its wireless E911 rules to wireless PBXs, then Northern requests that the base station location serve as valid ALI and that PBXs not be required to serve unregistered portable units. (39-42)

Ability of PBX to pass calling number and location identifier.

- In order to avoid locking the industry into obsolete standards, the FCC should either refer the question of station number identification signalling standards to a negotiated rulemaking or add references allowing DTMF or ISDN PRI/BRI signalling. (28-30)

- Northern seeks clarification that a PBX operator's obligations will be discharged if he passes only SNI with each call, thereby allowing the PSAP to look up caller location and call-back number in their database. (32-33)

Reach 911 without initial "9".

- Northern supports the rule requiring emergency access without dialing any leading digits. However, if this feature is implemented, then it will be very difficult to also grant those who dial 9-9-1-1 access to the dedicated E911 trunk. (29-30)

Attendant notification.

- Because it would be inordinately expensive to require attendants to be present on the site of small PBXs, the rules should make it clear that attendant notification is required only if an attendant is present. (32)

PBX owner's obligation to update LEC.

- The FCC should clarify the frequency with which larger PBX operators must update the LEC database and verify their own database. (26-27)

Training of PBX owner personnel.

- Because they are relatively simple to install, in the case of key telephone systems and small PBXs, Northern believes that there should be less stringent verification requirements for installation, testing and supervision. (25-26)

P.01 grade of service.

- The Commission should promulgate differing dedicated E911 trunk requirements depending on the size of the PBX system. (31-32)

- For PBXs with a dedicated 911 trunk, no PBX should be required to have more than one 911 route, even if some of the extensions are in the jurisdiction of a different PSAP. (36-37)

- In order to avoid excessive costs being imposed on multi-line subscribers, separate rates should be charged for the use of required, dedicated E911 trunks. (39)

Labelling of non-compliant equipment.

- Because "compliance" is mostly dependent upon software upgrades, and these take place after the equipment has left the manufacturer's control, the labelling requirement should be eliminated. (33-34)

Wireless-Related Issues:

General.

- Although it will delay the implementation of the technologies in question, in the long run, the nation will be well served by avoiding a patchwork of proprietary solutions to the wireless problems. Therefore, the FCC should commence a negotiated rulemaking in order to develop uniform, national solutions. (42-45)

- Importation and manufacturing cutoff dates for non-compliant equipment should not be set until design standards and PSAP/dedicated trunk issues are resolved. (60-62)

Availability of 911 to service-initialized handsets.

- Northern is concerned that requiring 911 access without user validation will lead to toll fraud and unreliable information being passed to PSAPs (in the case of stolen or altered phones). Therefore, Northern seeks a negotiated rulemaking on this issue. (49)

Need to press SEND.

- Agrees that future handsets should be able to reach a PSAP through either a speed dialing key, 9-1-1-SEND or 9-1-1. (48)

911 call priority.

- Because providing 911 priority is beyond the capabilities of current wireless systems, the one year proposed deadline is too stringent. This issue should be referred to a future negotiated rulemaking. (51, 54-55)

Provision of location information.

- Northern believes that most wireless systems can currently meet the Stage 1 base station requirement. However, in order to choose among the numerous potential Stage 3 location technologies, Northern urges the FCC to initiate a negotiated rulemaking to develop uniform and non-proprietary standards. In addition, Northern wants to be sure that Stage 3 requirements do not price wireless devices out of the reach of most Americans. (46-48, 58-60)

- Until a uniform and non-proprietary ALI method is established, wireless providers should only be required to route 911 calls to the PSAP nearest the receiving base station. (49-51)

- Suggests eliminating the Stage 2 requirements in that the marginally more accurate location information produced will not be worth the great expense required to meet these "dead-end" technological requirements. (56)

Re-ring/call back.

- In order to send and receive the 10 digits necessary for re-ring and call back, and the 12 to 14 digits necessary to communicate ALI, the signalling capacity of the cellular system will have to upgraded. Therefore, it is not possible to provide both re-ring/call back and ALI within 3 years. (45-46, 57-58)

Common channel signalling.

- Although the proposed 3 year deadline is aggressive, basic common channel signalling can be implemented within this deadline. (58-59)

Labelling.

- Northern suggests the following changes to the proposed labelling requirements. (51-53)

  -- Labelling should not be required for equipment which is capable of sending the required information, even if the wireless system can not process this information.

  -- Billing inserts should alert consumers to wireless systems which can not comply with E911 requirements.

  -- Equipment meeting the type acceptance process should not be subject to future labelling requirements.

  -- Labelling and warning requirements should not be effective until 6 months after the final rule is effective.

Funding.

- Funding should be addressed in a future, negotiated rulemaking. (62)

THE NYNEX COMPANIES

Interest: RBOC

PBX-Related Issues:

PBX owner's obligation to update LEC.

- The costs of ensuring that the ALI database is complete and accurate will be a significant expense that should be borne by the PBX operator or customer who installs the private system. They should also be responsible for the accuracy of the database. (4-5)

- PBX vendors should be required to provide an initial download of the ALI information associated with every live station telephone number behind the switch, organized with the telephone number as the key. (6)

- PBX operators must provide ALI information in the format agreed upon in negotiations with the local E911 providers. PBX operators must be responsible for updating ALI information every 24 hours. Updates must indicate any ALI information that may have changed. After updating ALI information, PBX providers must be responsible for downloading the updates to the E911 provider. ALI updates must be transmitted through a secure procedure, as determined by the local E911 provider and subject to the review of the local authority or board overseeing E911. (6)

Other.

- Supports FCC proposal to require customers who install private systems to provide the telephone company with the number of trunk connections desired, the number of stations that may originate emergency calls and the number and identification of emergency response locations that will require identification. The FCC should also adopt rules that require mechanization of the ALI data downloading process for PBXs, establish a minimum set of ALI fields as the standard to be imposed for each database entry, and permit local authorities to establish additional fields to be included in the ALI entries as deemed appropriate by them. (5-6)

- Recommends: 1) Proposed Section 68.106 should be modified to require that: Embedded PBXs that are technically capable of transmitting station number identification (SNI) and undergo additional or modifications after [insert date] shall comply with the rules; 2) PBX systems should have at least two diverse routed trunks connected to the central office for redundancy. The SNI from the PBX should be delivered directly to the E911 tandem switch via these diversely-routed trunks. The tandem switch can then forward the call to the PSAP and the ALI dip could be initiated either at the E911 tandem or the PSAP depending upon the type of network architecture deployed. (6)

Wireless-Related Issues:

911 call priority. FCC proposal to provide 911 calls priority is not technologically or economically practical. Criticizes possible solutions. The FCC should defer action pending further analysis by the industry. (13)

Provision of location information.

- FCC should adopt its Stage 1 proposals which require wireless providers to design their system so that the location of the base station or cell site receiving a 911 call from a mobile unit is transmitted to the PSAP. However, before considering additional rules, the FCC should allow industry a reasonable time to address and develop technical standards. Currently, the technology is not available to implement FCC Stage 2 and 3 requirements and expecting it to be available in the next five years is unrealistic. The FCC should encourage interested parties to participate in industry forums. (8-10)

- If the FCC does issue rules, it should consider the following: 1) All CMRS providers of voice services should be subject to the same requirements (Customers in rural areas should expect the same quality of access to emergency services as customers in more densely populated or urban areas); 2) Callers should have the ability to dial 911 to reach emergency services in home areas or subscribed to roamed service areas from any initialized handset; 3) End-to-end grade-of-service issues within wireless systems should be addressed to CMRS providers since competitive forces will serve to minimize call blockage. (11-12)

- Technology is not currently available, and may not be available in the next five years, to meet the FCC's ALI proposal. The FCC should allow industry to continue to search for solutions. (13-14)

Access to TTY devices. Agrees that all CMRS providers should support calls from TTDs. Since the ADA places the burden of having the proper equipment to communicate with a TTD caller on the emergency agency, no new FCC rules are required to ensure access to 911 services. (15)

Other Issues:

Preemption Funding. Local emergency services authorities should be permitted to design appropriate funding and cost recovery mechanisms since service and funding requirements are likely to vary from region to region. (7)

OFFICE OF EMERGENCY TELECOMMUNICATIONS SERVICES
DIVISION OF STATE POLICE
DEPARTMENT OF LAW AND PUBLIC SAFETY
STATE OF NEW JERSEY

Interest: E-911 network operator.

- New Jersey, within three years, implemented a statewide, multi-switch, seamless E-911 system. The State spent $94,565,000, and local municipalities spent $10,507,000 for PSAP equipment, for a total cost of $105,072,000. The costs include network maintenance, database maintenance, and all dedicated 911 trunks through the year 2005. (3-5)

PBX-Related Issues:

Ability of PBX to pass calling number and location identifier.

- PBX systems must be able to forward the calling party's extension to the 911 tandem and its selective router.
  - Argues against adopting a system requiring two trunks from each PBX switch to selective routers within the 911 tandems, or the T1.411 ANSI Standard, as too costly and impractical. (8-10)
  - Supports setting up a full ten-digit ANI of the PBX extension as most practical, economical, and compatible with its existing system. Recommends the TeLocator system, which will route 911 calls without the need of additional circuits. (10-11)

- Disagrees with FCC suggestion that selective routing (SR) is not needed everywhere, and is only useful when telephones exchange boundaries extend into two or more PSAP jurisdictions. SR is useful everywhere, for all PSAPs. (12)

- A coordinate-based locational system should be developed to selectively route all single circuit wireline, PBX, and wireless calls.

  - This system would require minimal software and hardware modifications to the PSTN, eliminate the need for costly dedicated 911 MSAG database systems, reduce the start-up and ongoing costs of 911 systems by as much as 50 percent, reduce problems caused by dual addressing when postal and actual addresses

differ, and avoid the constant updating of databases by LECs. (17)

- New Jersey is looking at several options, such as TeLocator type devices on all PBX extensions and in residential outside connection blocks, or listing the latitude and longitude in an additional data field in the central office switch where the ANI number is stored and routing it to a computer map. 18)

- New Jersey has reviewed software that converts latitude and longitude to a city style address and vice versa, either at the PSAP or in the network secondary to selective routing. (18)

Reach 911 without initial "9".

- Supports FCC proposal. (11)

Attendant notification.

- Supports FCC proposal. Submits that it would not conflict with New Jersey regulations. (12)

Labelling of non-compliant equipment.

- Supports FCC proposal. (12)

Wireless-Related Issues:

Provision of location information.

- Wireless devices must be integrated into an E-911 system. Wireless 911 calls are increasing rapidly. (5-7)

- Crank 911 calls from cellular phones have increased. (7)

- Agrees with FCC that location of all wireless 911 devices should be provided at the time of the call. (13)

- Agrees with requiring, within one year, as interim step, that wireless service providers relay to the PSAP location of base station or cell site receiving 911 call from mobile unit. (14)

- New Jersey has successfully demonstrated a real-time coordinate-based ALI test. The RALI (Roving Automatic Location Identification) system, using an

advanced Rockwell global positioning system (GPS) receiver chip, was able to identify the location, longitude and latitude, heading, speed, and call back number of a cellular caller. Observers all agreed that such a system could be implemented within two years. (14-15)

- GPS performs well for mobile cellular phones with an external roof-mounted GPS antenna. Concedes, however, that it has not tested GPS for portable cellular phones used within vehicles without such an antenna, portable 600 mW phones with a self-contained GPS antenna, or PCS. (16)

- Timing.

  - The FCC's five-year proposal for wireless ALI and ANI should be shortened to four years: two years for testing and evaluations and two years for hardware and software modifications. (16)

  - To meet this time frame, the FCC should appoint a committee to review all known locational systems and to recommend a preferred wireless ALI and ANI method within two years, to be implemented within the next two years. (16-17)

- Flexible goals v. firm deadlines.

  - Supports extensive standards rather than general performance criteria. (18)

  - The FCC should appoint a committee, including representatives of the public safety community and telephone industry, to recommend standards. (19)

Re-ring/call-back.

- Agrees that call back number of all wireless 911 devices should be provided at the time of the call. (13)

- Call Party Hold and Ring Back should be required in all E-911 systems. (18)

OREGON STATE POLICE, EMERGENCY MANAGEMENT DIVISION

Interest: State agency responsible for implementing Oregon's mandate to provide E911 service statewide by 1/1/00.

PBX-Related Issues:

Ability of PBX to pass calling number and location identifier.

- Supports requiring SNI in accordance with state regulation. (3-4)

Timing of compliance.

- Supports FCC timetable. (4)

Reach 911 without initial "9".

- Supports rule requiring 911 access without dialing additional digits. (3)

Attendant notification.

- Supports attendant notification. (3)

PBX owner's obligation to update LEC.

- Supports obligation to update LEC. (3)

Need for standard data link interface.

- Supports current use of CAMA interface and use of NENA data exchange standards. (4)

Labelling of non-compliant equipment.

- Supports labelling of non-compliant equipment. (3)

Other.

- All providers of dialtone should have to provide 911 access in accordance with these rules. (4)

Wireless-Related Issues:

General.

- Supports establishing grade of service requirement for access to wireless 911 service. (5)